

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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|----------------|--|-------------------|------|
| Appl. No. :    | 10/526,587   | Confirmation No.: | 3809 |
| Applicants :   | Tokyo-to Akira Sano  |                   |      |
| Title:         | Method for the Management of Service Quality Information in Web Services |                   |      |
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| Examiner :     | Esther Benoit  |                   |      |
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**BRIEF ON APPEAL**

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Commissioner for Patents  
P.O. Box 1450, Alexandria, VA 22313-1450

This is an appeal from the Final Office Action, mailed on June 4, 2010, finally rejecting claims 8 and 21-30.

The fee for filing this Brief on Appeal is \$540.00 and is being paid electronically at the time of filing of this Brief. If this amount is insufficient, or should any additional fees under 37 C.F.R. § 1.16 to 1.21 be required for any reason relating to the enclosed materials, the Commissioner is authorized to deduct said fees from IBM Corporation, Deposit Account No. 09-0447.

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**REAL PARTY IN INTEREST**

The real party in interest is International Business Machines Corp. (IBM) of Armonk, New York

**RELATED APPEALS AND INTERFERENCES**

The Appellants are not aware of any related appeals, interferences or judicial proceedings that will directly affect, be directly affected by or have a bearing on the Board's decision in the pending appeal.

# **STATUS OF CLAIMS**

Claims 8 and 21-30 are currently pending and have been finally rejected.

Claims 8 and 21-30 are rejected under 35 U.S.C. §102(b) as being anticipated by Kreger (*Web Services Conceptual Architecture* (WSCA 1.0), May 2001).

The rejections of claims 8 and 21-30 are being appealed.

**STATUS OF AMENDMENTS**

All amendments to the claims have been entered.

### **SUMMARY OF CLAIMED SUBJECT MATTER**

In general, the present invention relates to a techniques to enable a user to choose among multiple web services based upon Quality of Service (QoS) information provided by a web service provider. Each claim being appealed is summarized below. References to the Specification refer to the paragraphs of the published application, U.S. Pat. Pub. No. 2005/0235053, published October 20, 2005.

Claims 1-7 have been canceled.

**Claim 8** is an independent method claim that relates to selecting a web service (10, FIG. 1; ¶0059; FIG. 2). Elements include transmitting a search request ([4] Request Service; FIG. 1) for a service from a service requestor (30, FIG. 1; ¶0058]) to a management site (20, FIG. 1; ¶0059) that searches for software services ([3], Search For Service; FIG. 1) provided via a network (106, FIG. 3; ¶0068]); obtaining by the search requestor (30, FIG. 1; ¶0058]) a service search result (¶0099, FIG. 9) from the management site (20, FIG. 1; ¶0059) including information for determining quality of services (¶0108, FIG. 11) corresponding to a plurality of provider sites (¶0112, FIG. 12), wherein the quality of service information is provided by the provider sites (10, FIG. 1; ¶0059; FIG. 2) and accumulated by the management sites (20, FIG. 1; ¶0059); selecting by the service requestor (¶0106]) at least one software service based on the obtained search result (¶0099, FIG. 9); and transmitting a request to execute the selected service (Service Request, FIG. 10; ¶0106]) to the service provider (10, FIG. 1; ¶0059; FIG. 2).

Claims 9-20 have been canceled.

**Claim 21** is a dependent method claim that includes all the elements of **Claim 8**, as described above, relating to selecting a web service (10, FIG. 1; ¶0059; FIG. 2). In addition, **Claim 21** includes the limitations that the service provider (10, FIG. 1; ¶0059; FIG. 2) and the management site (20, FIG. 1; ¶0059) are different sites.

**Claim 22** is a dependent method claim that includes all the elements of **Claim 8**, as described above, relating to selecting a web service (10, FIG. 1; ¶0059; FIG. 2). In addition, **Claim 22** includes the limitations that the information (¶[0108], FIG. 11) includes a number of times the software services have been used (¶[056]), a frequency of use corresponding to the software services (¶[056]); an execution time corresponding to the software services (¶[056]) and a maintenance time corresponding to the software services (¶[056]).

**Claim 23** is a dependent method claim that includes all the elements of **Claim 8**, as described above, relating to selecting a web service (10, FIG. 1; ¶0059; FIG. 2). In addition, **Claim 23** includes the limitations that the information (¶[0108], FIG. 11) includes a service history resulting from execution of the service (¶[056]).

**Claim 24** is an independent apparatus claim that relates to selecting a web service (10, FIG. 1; ¶0059; FIG. 2). Elements include at least two service providers (10, FIG. 1; ¶0059; FIG. 2; 131, FIG. 13; ¶0056) for providing a software service (¶[002]; 10, FIG. 1; ¶0059; FIG. 2); and a management service (20, FIG. 1; ¶0059) comprising a control program (¶[0059]) for receiving a service request (10, FIG. 1; ¶0059; FIG. 2) corresponding to the software service (¶[002]; 10, FIG. 1; ¶0059; FIG. 2) from a service requestor (30, FIG. 1; ¶[0058]); searching for the at least two service providers ([3], Search For Service; FIG. 1); collecting quality of service (QoS) information (¶[0108], FIG. 11) corresponding to each of the at least two service providers (10, FIG. 1; ¶0059; FIG. 2; 131, FIG. 13; ¶0056), wherein the QoS information (¶[0108], FIG. 11) is provided by the at least two service providers (10, FIG. 1; ¶0059; FIG. 2; 131, FIG. 13; ¶0056) and accumulated by the management service (20, FIG. 1; ¶0059); and transmitting the QoS information (¶[0108], FIG. 11) to the service requestor to enable the service requestor (30, FIG. 1; ¶[0058]) to select among the at least two service providers (10, FIG. 1; ¶0059; FIG. 2; 131, FIG. 13; ¶0056).



**Claim 25** is a dependent apparatus claim that includes all the elements of **Claim 24**, as described above, relating to selecting a web service (10, FIG. 1; ¶0059; FIG. 2). In addition, **Claim 25** includes the limitations that the information (¶0108, FIG. 11) includes a number of times the software services have been used (¶056), a frequency of use corresponding to the software services (¶056); an execution time corresponding to the software services (¶056) and a maintenance time corresponding to the software services (¶056).

**Claim 26** is a dependent apparatus claim that includes all the elements of **Claim 24**, as described above, relating to selecting a web service (10, FIG. 1; ¶0059; FIG. 2). In addition, **Claim 26** includes the limitations that the information (¶0108, FIG. 11) includes a service history resulting from execution of the service (¶056).

**Claim 27** is an independent method of manufacture claim that relates to selecting a web service (10, FIG. 1; ¶0059; FIG. 2). Elements include a computer-readable memory (103, 105, 109, FIG. 3; ¶0068) and logic execution on a processor (101, FIG. 3; ¶0068) for transmitting a search request ([4] Request Service; FIG. 1) for a service from a service requestor (30, FIG. 1; ¶0058) to a management site (20, FIG. 1; ¶0059) that searches for software services ([3], Search For Service; FIG. 1) provided via a network (106, FIG. 3; ¶0068); obtaining by the search requestor (30, FIG. 1; ¶0058) a service search result (¶0099, FIG. 9) from the management site (20, FIG. 1; ¶0059) including information for determining quality of services (¶0108, FIG. 11) corresponding to a plurality of provider sites (¶0112, FIG. 12), wherein the quality of service information is provided by the provider sites (10, FIG. 1; ¶0059; FIG. 2) and accumulated by the management sites (20, FIG. 1; ¶0059); selecting by the service requestor (¶0106) at least one software service based on the obtained search result (¶0099, FIG. 9); and transmitting a request to execute the selected service (Service Request, FIG. 10; ¶0106) to the service provider (10, FIG. 1; ¶0059; FIG. 2).

**Claim 28** is a dependent method of manufacture claim that includes all the elements of **Claim 27**, as described above, relating to selecting a web service (10, FIG. 1; ¶0059, FIG. 2). In addition, **Claim 28** includes the limitations that the service provider (10, FIG. 1; ¶0059, FIG. 2) and the management site (20, FIG. 1; ¶0059) are different sites.

**Claim 29** is a dependent method of manufacture claim that includes all the elements of **Claim 27**, as described above, relating to selecting a web service (10, FIG. 1; ¶0059, FIG. 2). In addition, **Claim 29** includes the limitations that the information (¶[0108], FIG. 11) includes a number of times the software services have been used (¶[056]), a frequency of use corresponding to the software services (¶[056]); an execution time corresponding to the software services (¶[056]) and a maintenance time corresponding to the software services (¶[056]).

**Claim 30** is a dependent method of manufacture claim that includes all the elements of **Claim 27**, as described above, relating to selecting a web service (10, FIG. 1; ¶0059, FIG. 2). In addition, **Claim 30** includes the limitations that the information (¶[0108], FIG. 11) includes a service history resulting from execution of the service (¶[056]).

**GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

1. Whether a group of claims consisting of **independent claims 8, 24 and 27 and dependent claims 20-23, 25, 26 and 28-30** are anticipated under 35 U.S.C. §102(b) over by Kreger (*Web Services Conceptual Architecture* (WSCA 1.0), May 2001).

**ARGUMENTS OF APPELLANTS**

1. Whether a group of claims consisting of independent claims 8, 24 and 27 and dependent claims 20-23, 25, 26 and 28-30 are anticipated under 35 U.S.C. §102(b) over by Kreger (*Web Services Conceptual Architecture* (WSCA 1.0), May 2001).

**Claims 8, 24 and 27**

In a Response to Arguments section of the Final Office Action dated June 4, 2010 (F.O.A.) the Examiner explains:

On page 21, paragraphs 3-6, Kreger discloses receiving QOS parameters regarding web services from web services providers and storing the QOS parameters in a repository of a UDDI node ...

(p. 2, lines 16-19). Although, Kreger suggests a system in which service requestors may receive a service description, including “properties (such as QOS parameters),” Kreger does not explain the source of the QOS parameters. Applicants’ claimed subject matter specifically states, “the quality of service information is provided by the provider sites.” Kreger does state, “At run-time, service requestors search for a Web service based upon how they communicate or qualities of service advertized” (p. 21, ¶3). Again, there is nothing in Kreger to suggest who “advertizes” and since the description regards communication between the service provider and the UDDI, which is analogized as Applicants’ “management site,” it seems save to assume that the UDDI is doing the advertizing.

Therefore, Appellants submit that the current grounds of rejection are in error and that dependent claims independent claims 8, 24 and 27 are in condition for allowance. Therefore, a reversal of the §102(b) rejections of claims 8, 24 and 27 is respectfully solicited.

**Claims 22, 25 and 29**

With respect to claims 22, 25 and 29, the F.O.A. mischaracterizes “historical data” as Applicants’ “number of times the software service has been used, frequency of use of the software service; execution time of the software service, and maintenance time for the software service.” It should be noted that claims 23, 26 and 30, which depend upon the same independent claims as claims 22, 25 and 29, refer to “service history,” which according to the principle of claim differentiation would imply that the relevant elements of claims 22, 25 and 29 are different than “service history.”

In the Response to Arguments section of the F.O.A., the Examiner states:

Kreger discloses execution time of service which corresponds to the number of time the software has been used, frequency of use of the software service, execution time of the software service and the time to initiate recovery or alternate flows corresponds to the maintenance time of the service.

(p. 3, lines 12-15). In other words, the simple phrase “execution time of service” is relied upon for each and every one of Applicants’ elements specified above, i.e. 1) “number of time the software has been used,” 2) “frequency of use of the software service,” 3) “execution time of the software service” and 4) the time to initiate recovery or alternate flows corresponds to the maintenance time of the service.” In fact, Kreger does not suggest each of these elements.

In addition, claims 22, 25 and 29 are allowable for the same reasons explained above with respect to claims 8, 24 and 27. In addition, claims 22, 25 and 29 are allowable because each depends upon one of the allowable independent claims. Therefore, Appellants submit that the current grounds of rejection are in error and that dependent claims dependent claims 22, 25 and 29 are in condition for allowance. Therefore, a reversal of the §102(b) rejections of claims 22, 25 and 29 is respectfully solicited.

**Claims 20, 21, 23, 26, 28 and 30**

Claims 20, 21, 23, 26, 28 and 30 are allowable for the same reasons explained above with respect to claims 8, 24 and 27. In addition, claims 20, 21, 23, 26, 28 and 30 are allowable because each depends upon one of the allowable independent claims.

Therefore, Appellants submit that the current grounds of rejection are in error and that dependent claims dependent claims 20, 21, 23, 26, 28 and 30 are in condition for allowance. Therefore, a reversal of the §102(b) rejections of claims 20, 21, 23, 26, 28 and 30 is respectfully solicited.

Respectfully submitted,

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**CLAIMS APPENDIX**

(Currently Pending Claims)

1-7. (Canceled)

8. (Previously presented) A method of selecting a web service comprising:  
transmitting a search request for a service from a service requestor to a  
management site that searches for software services provided via a  
network;  
obtaining by the search requestor a service search result from the management site  
including information for determining quality of services corresponding to  
a plurality of provider sites, wherein the quality of service information is  
provided by the provider sites and accumulated by the management sites;  
selecting by the service requestor at least one software service based on the  
obtained search result; and  
transmitting a request to execute the selected service to the service provider.

9-20. (Canceled)

21. (Previously presented) The method of claim 8, wherein the service  
provider and the management site are different sites.

22. (Previously presented) The method of claim 8, wherein the information includes a number of times the software services have been used, a frequency of use corresponding to the software services; an execution time corresponding to the software services and a maintenance time corresponding to the software services.

23. (Previously presented) The method of claim 8, wherein the information includes a service history resulting from execution of the service.

24. (Previously presented) A network system that provides software services via a network, comprising:

at least two service providers for providing a software service; and

a management service comprising a control program for:

receiving a service request corresponding to the software service from a service requestor;

searching for the at least two service providers;

collecting quality of service (QoS) information corresponding to each of the at least two service providers, wherein the QoS information is provided by the at least two service providers and accumulated by the management service; and

transmitting the QoS information to the service requestor to enable the service requestor to select among the at least two service providers.



25. (Previously presented) The network system according to claim 24, wherein the information comprises:

- the number of times the software service has been used;
- frequency of use of the software service;
- execution time of the software service; and
- maintenance time for the software service.

26. (Previously presented) The network system of claim 24, wherein the information comprises a service history resulting from execution of the service.

27. (Previously presented) A computer program for selecting a web service comprising:

- a computer-readable memory; and
- logic, stored on the memory for execution on a processor, for:
  - transmitting a search request for a service from a service requestor to a management site that searches for software services provided via a network;
  - obtaining by the search requestor a service search result from the management site including information for determining quality of services corresponding to a plurality of provider sites, wherein the quality of service information is provided by the plurality of provider sites and accumulated by the management site;

selecting by the service requestor at least one software service based on  
the obtained search result; and  
transmitting a request to execute the selected service to the service  
provider.

28. (Previously presented) The computer program of claim 27, wherein the  
service provider and the management site are different sites.

29. (Previously presented) The computer program of claim 27, wherein the  
information includes a number of times the software services have been used, a frequency of use  
corresponding to the software services; an execution time corresponding to the software services  
and a maintenance time corresponding to the software services.

30. (Previously presented) The computer program of claim 27, wherein the  
information includes a service history resulting from execution of the service.

**EVIDENCE APPENDIX**

No evidence has been submitted in conjunction with this application.

**RELATED PROCEEDINGS APPENDIX**

There are currently no related proceedings associated with this application.